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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/744,291	04/04/2001	David Smith	FRE-P-01	4015
23438	7590	10/06/2003	EXAMINER	
JON C GEALOW & ASSOCIATES 2903 NORTH BAYVIEW LANE MCHENRY, IL 60050			ZEMAN, MARY K	
			ART UNIT	PAPER NUMBER
			1631	8

DATE MAILED: 10/06/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/744,291

Applicant(s)

SMITH ET AL.

Examiner

Mary K Zeman

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 25 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) 7, 14 and 21 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6, 8-13 and 15-20 is/are rejected.
- 7) ☒ Claim(s) 4-6, 13 and 20 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 March 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3. 6) ☐ Other:

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### **DETAILED ACTION**

Applicant's election with traverse of Group I, claims 1-6, 8-13 and 15-20 in Paper No. 7 is acknowledged. The traversal is on the ground(s) that the methods have the same steps and are therefore not lacking in unity. This is not found persuasive because the method steps of claim 1 and claim 7 are in fact, not the same. Claim 7 has a step of "utilizing sets of predetermined values of the variables to formulate an n-dimensional surface describing the predetermined state within the n-dimensional space." This limitation is not present in claim 1. Claim 1 has the limitation of "monitoring the evolution of the biological system..." which is not set forth in claim 7. Therefore, these are clearly differing methods, having differing steps and goals. As such they lack unity as previously set forth.

The requirement is still deemed proper and is therefore made FINAL.

Claims 7, 14 and 21 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in Paper No. 7.

### ***Priority***

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file. These priority papers were forwarded from the IB, in association with the filing of the national phase application.

### ***Information Disclosure Statement***

The IDS filed 04 April 2001 has been entered and considered. An initialed copy of the form PTO-1449 is enclosed with this action.

### ***Drawings***

The drawings are acceptable to the examiner as filed.

### ***Claim Objections***

Claims 6, 13 and 20 objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim cannot depend from another multiply dependent claim. See MPEP

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§ 608.01(n). The examiner looked for a preliminary amendment addressing this issue but did not find one. The transmittal papers appear to acknowledge that these claims are improper and can only be charged as a single claim for fee purposes, (See LETTER in response to the notification of missing requirement under 35 USC 371, filed 4 April 2001, second page) but no subsequent amendment could be identified in the file. These claims have been examined as if they depended solely from the independent claim.

Claims 4 and 5 are objected to as they are duplicative. Claim 5 repeats the same limitation as claim 4. Both depend from claim 2. Claim 5 is slightly different in scope in that it also depends from claim 4, but then it is not further limiting of claim 4 as it recites the same limitation. It would appear from reading the corresponding system and program claims that this is a typographical error, and that a differing limitation was intended. The claims, however, are examined as presented.

### ***Claim Rejections - 35 USC § 101***

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1-6 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. These claims merely analyze the evolution of a system and do not end with a concrete diagnosis, prediction or other result that is immediately concrete, tangible and useful. MPEP 2106: "For such subject matter to be statutory, the claimed process must be limited to a practical application of the abstract idea or mathematical algorithm in the technological arts. See *Alappat*, 33 F.3d at 1543, 31USPQ2d at 1556-57 (quoting *Diamond v. Diehr*, 450 U.S. at 192, 209 USPQ at 10). See also *Alappat* 33 F.3d at 1569, 31 USPQ2d at 1578-79 (Newman, J., concurring) ("unpatentability of the principle does not defeat patentability of its practical applications") (citing *O'Reilly v. Morse*, 56 U.S. (15 How.) at 114-19). A claim is limited to a practical application when the method, as claimed, produces a concrete, tangible and useful result; i.e., the method recites a step or act of producing something that is concrete, tangible and useful. See *AT &T*, 172 F.3d at 1358, 50 USPQ2d at 1452. Likewise, a machine

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claim is statutory when the machine, as claimed, produces a concrete, tangible and useful result (as in *State Street*, 149 F.3d at 1373, 47 USPQ2d at 1601) and/or when a specific machine is being claimed (as in *Alappat*, 33 F.3d at 1544, 31 USPQ2d at 1557 (in banc))."

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-6, 8-13 and 15-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Maguire Jr. (1974).

The claims are drawn to a method, system and program for analyzing the evolution of a biological system wherein system dependent variables are mapped to n-dimensional space, monitored, and evaluated. N is preferably more than 2, the method predicts the progression of the trajectory, and speed upon a trajectory is shown.

Maguire Jr. (Maguire Jr., B. Ecosystem simulation through use of models of subsystem response structures. *Simulation*, 1974, Vol. 23, No. 5, pages 149-158.) discloses analysis of biological systems wherein system dependent variables are mapped to n-dimensional space. Maguire Jr. discusses both an ecological system- which is models biological elements (pages 149-156). This model includes various organisms, making it a biological system. Maguire Jr. also specifically discusses human biological systems (pages 156-158). Maguire identifies a series of variables upon which the system depends: for example, level of health, income, age, and safety level, authoritarian level for a human population (page 156.). The variables are mapped to n-dimensional space, then monitored and evaluated for change over time or evolution (see all figures). At page 149, Maguire Jr. states that while only two dimensions are used for example in the paper, "extension to as many dimensions as may be desirable is elementary and straightforward, both conceptually and computationally." Therefore, "n" can be greater than 2. These simulations of Maguire predict progression and/or speed of the trajectories of a given variable: i.e. Potential activity or behaviors as a result of other factors. These methods of

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Maguire Jr. were performed on programmed computers which meet the limitations of the computer system and computer program claims. As such, this disclosure meets the limitations of the rejected claims.

*Conclusion*

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Canguilhem US 3,628,904 discloses in detail, the theories of multidimensional problem solving..

No claim is allowed.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mary K Zeman whose telephone number is (703) 305-7133.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Woodward, can be reached at (703) 308-4028.

The Official fax number for this Art Unit is: (703) 872-9306

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the TC1600 Receptionist whose telephone number is (703) 308-0196.

mkz  
9/24/03

  
MARY K. ZEMAN  
PRIMARY EXAMINER  
A01631